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10/075,027	02/14/2002	Yoshikazu Aoki	122.1488	7499

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EXAMINER

MERED, HABTE

ART UNIT PAPER NUMBER

2616

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/075,027	Applicant(s) YOSHIKAZU AOKI	
	Examiner Habte Mered	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7,8,10,12 and 14-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,8,10,12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 5/9/2006 has been entered and fully considered.
2. Claims 2, 4, 6, 9, 11, and 13 are cancelled. Claims 16-18 are new claims.
Claims 1, 3, 5, 7, 8, 10, 12, and 14-18 are pending.

Claim Objections

3. **Claims 1, 3, 8, 10, 15, 16, 17, and 18** are objected to because of the following informalities:

- In **claim 1**, it is not clear from the claim language if the remote node in line 9 is the same as or different from the remote node in line 10. The phrase "...a remote node..." in line 10 should be replaced with the phrase "...a *different* remote node..."
- In **claim 8**, it is not clear from the claim language if the remote node in line 8 is the same as or different from the remote node in line 9. The phrase "...a remote node..." in line 9 should be replaced with the phrase "...a *different* remote node..."
- In **claim 15**, it is not clear from the claim language if the remote node in line 11 is the same as or different from the remote node in line 12. The phrase "...a remote node..." in line 12 should be replaced with the phrase "...a *different* remote node..."
- In **claim 3**, the phrase "...judging whether the polling executed the number of nodes corresponding to the transmission line that has been selected; ..." in line 13 needs to be rephrased. Again in lines 14-15, the phrase "...a ratio o of

the total polling executed node number divided by the number of nodes executed in each of the transmission lines.." needs to be rephrased. Also in line 17, the phrase "...the total polling executed number and the polling executed number for each transmission line..." needs to be rephrased. It is suggested that the Applicant should replace the phrase "total polling executed node number" with "total number of nodes polled in the network" and the phrase "polling executed number for each transmission line" with the phrase "number of the polled nodes of each transmission line".

- In **claim 10**, the phrase "...judging whether the polling executed the number of nodes corresponding to the transmission line that has been selected; ..." in line 10 needs to be rephrased. Again in lines 13-14, the phrase "...a ratio o of the total polling executed node number divided by the number of nodes executed in each of the transmission lines.." needs to be rephrased. Also in line 16, the phrase "...the total polling executed number and the polling executed number for each transmission line..." needs to be rephrased. It is suggested that the Applicant should replace the phrase "total polling executed node number" with "total number of nodes polled in the network" and the phrase "polling executed number for each transmission line" with the phrase "number of the polled nodes of each transmission line".
- In **claim 16**, the phrase "...judging whether the polling executed the number of nodes corresponding to the transmission line that has been selected; ..." in line 13 needs to be rephrased. Again in lines 16-17, the phrase "...a ratio o of

the total polling executed node number divided by the number of nodes executed in each of the transmission lines.." needs to be rephrased. Also in line 20, the phrase "...the total polling executed number and the polling executed number for each transmission line..." needs to be rephrased. It is suggested that the Applicant should replace the phrase "total polling executed node number" with "total number of nodes polled in the network" and the phrase "polling executed number for each transmission line" with the phrase "number of the polled nodes of each transmission line".

- In **claim 17**, the phrase "...judging whether the polling executed the number of nodes corresponding to the transmission line that has been selected; ..." in line 10 needs to be rephrased. Again in lines 13-14, the phrase "...a ratio o of the total polling executed node number divided by the number of nodes executed in each of the transmission lines.." needs to be rephrased. Also in line 16, the phrase "...the total polling executed number and the polling executed number for each transmission line..." needs to be rephrased. It is suggested that the Applicant should replace the phrase "total polling executed node number" with "total number of nodes polled in the network" and the phrase "polling executed number for each transmission line" with the phrase "number of the polled nodes of each transmission line".
- In **claim 18**, the phrase "...judging whether the polling executed the number of nodes corresponding to the transmission line that has been selected; ..." in line 20 needs to be rephrased. Again in lines 22-24, the phrase "...a ratio o

of the total polling executed node number divided by the number of nodes executed in each of the transmission lines.." needs to be rephrased. Also in lines 26-27, the phrase "...the total polling executed number and the polling executed number for each transmission line..." needs to be rephrased. It is suggested that the Applicant should replace the phrase "total polling executed node number" with "total number of nodes polled in the network" and the phrase "polling executed number for each transmission line" with the phrase "number of the polled nodes of each transmission line".

- In **claim 10**, the limitation "... the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the number of remote nodes that are accommodated in the divided groups of transmission lines;..." needs to be rephrased. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 3, 5, 7, 8, 10, 12, and 14**, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "...the communication interval..." in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "...the communication interval..." in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 3, recites the limitation "...the operating frequency of each transmission line..." in line 6. It is not clear what the phrase "operating frequency" really means. Strictly speaking what is claimed implies the radio frequency of the transmission line, which contradicts the description of the invention given in the specification. It is suggested that the use of the phrase "frequency of a transmission line" throughout the specification and the claims be replaced by "frequency of using a transmission line".

Claim 5, recites the limitation "...the operating frequency of each transmission line..." in line 3. It is not clear what the phrase "operating frequency" really means. Strictly speaking what is claimed implies the radio frequency of the transmission line, which contradicts the description of the invention given in the specification. It is also not clear how the operating frequency of each transmission line is tied to the line speed of the transmission line. It is suggested that the use of the phrase "frequency of a transmission line" throughout the specification and the claims be replaced by "frequency of using a transmission line".

Claims 7 and 14, recite the limitations "... polling interval..." and "...communication interval...". It is not at all clear what if any differences exist between these intervals. A mathematical relationship is given in the specification to define the communication interval while no exact definition is provided for the polling interval.

Claims 1, 7, 8, 12, 14, and 15 recites, in the last line, the limitation "... a communication waiting time.". The specification mentions communication waiting time in

paragraphs 11 and 16 and merely states that it is part of the communication interval but does not clearly define what exactly constitutes “a communication waiting time”. It is not clear if it is the same as or different from the node processing time mentioned in the specification. Since claim 10 also depends on claim 8, the 112 2nd paragraph rejection of claim 8 also applies to the dependent claim 10.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 7, 8, 14, and 15** as best understood in view of the above 112 2nd paragraph rejections are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (US 6, 507, 565), in view of in view of Jun (Japanese Patent Publication Number 02-131044) and Takashi et al (Japanese Patent Publication Number 02-131044), hereinafter referred to as Takashi.

Taylor teaches a method and system for managing remote resources in a telecommunication network.

Taylor teaches a system, a method and a computer-readable program for dispersing the load of network in data communications between a monitoring unit (**Figure 1, element 14, i.e. Resource Management Station**) and a plurality of remote nodes (**Figure 1, elements 36 and 12**) that are connected to the monitoring unit via a broadband network (**Connection is ADSL – See Column 2:53-65**), where in the

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monitoring unit comprises: a communication or polling order determining unit (**Figure 1, elements 92 and 74 and Figure 2, step 206 and Column 7:45-51**) that determines an order of communications between the monitoring unit and the plurality of remote nodes, a communication or polling interval determining unit (**Figure 1, element 90 and Figure step 200 and Column 7:45-51**) that determines a communication interval between a remote node with which the monitoring unit communicates this time and a *different* remote node with which the monitoring unit communicates a next time, among the plurality of remote nodes that communicate with the monitoring unit. (**See also Column 5:65-67 and Column 6:1-23**)

Taylor fails to disclose a method of avoiding local traffic congestion in a communication route.

Jun teaches a communication network management method that avoids local traffic congestion by varying the polling interval.

Jun discloses a method of avoiding local traffic congestion in a communication route. (**See Abstract and solution sections as well as Paragraphs 19 and 20**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Taylor's system with a method of avoiding local traffic congestion in a communication route. The motivation for avoiding local congestion during polling is to have a fair distribution of the polling process amongst polled nodes.

Taylor fails to disclose a system and method for dispersing the load of a network wherein the communication interval is obtained as follows: a repetition period for repetitively executing communications with the whole plurality of remote nodes is

divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time.

Takashi teaches a polling sequence deciding system.

Takashi teaches a system and method for dispersing the load of a network wherein the communication interval is obtained as follows: a repetition period for repetitively executing communications with the whole plurality of remote nodes is divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time. **(Takashi teaches a polling control unit – see the abstract and constitution sections. Takashi shows in particular in the constitution section that once a polling period is determined for polling the nodes in the network then the polling interval is simply the quotient from the division of the polling period by the total number of nodes. Taking into account each node's processing time by subtracting it from the quotient does not change the effective polling interval from being the quotient as taught by Takashi from the perspective of the next node about to be polled.)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Taylor's system with a polling sequence where the whole plurality of remote nodes is divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time. The motivation of

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using such a means of determining a polling interval is its simplicity to use and provides fairness to all potential nodes participating in the polling system.

Allowable Subject Matter

8. Claims 16-18 are allowed
9. The following is an examiner's statement of reasons for allowance:

Claims 16, 17, and 18 are allowable over the prior art of record since the cited references, taken individually or in combination, fail to particularly teach or suggest a system (i.e. claim 16), a method (i.e. claim 17), a computer-readable recording medium (i.e. claim 18) for distributing the load of a monitoring unit through polling a plurality of nodes wherein the nodes are connected to the monitor via broadband network and wherein the monitoring unit comprises a polling order determining unit, a polling interval determining unit, and a control unit that controls the monitoring unit to carry out polling of the plurality of nodes to be monitored by selecting nodes associated with a transmission line to be polled based on the basis of a comparison of a ratio of the total number of nodes in the network being monitored divided by the number of nodes associated with the transmission line with a ratio of the current total polled nodes in the network divided by the current total number of polled nodes associated with the transmission line. It is noted that the closest prior art Takashi et al (Japanese Patent Publication Number 02-131044) discloses selecting nodes to be polled based on a constant polling interval.

Response to Arguments

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10. Applicant's arguments with respect to claims 3-15 have been considered but are moot in view of the new ground(s) of rejection.

11. In the Remarks, on page 12, Applicant simply argues Takashi et al does not teach the method of determining communication interval claimed in claim 1. Examiner respectfully disagrees.

Takashi shows in particular in the constitution section that once a polling period is determined for polling the nodes in the network then the polling interval (i.e. communication interval) is simply the quotient from the division of the polling period by the total number of nodes. Taking into account each node's processing time by subtracting it from the already determined quotient does not change the effective polling interval from being the quotient as taught by Takashi from the perspective of the next node about to be polled.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HM
7-21-2006



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